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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

0480

September 15, 1997

**VIA HAND DELIVERY**

Mr. William F. Caton  
Acting Secretary  
Federal Communications Commission  
1919 M Street, N.W. - Room 222  
Washington, D.C. 20554

Re: PR Docket No. 92-257  
RM-7956, 8031, 8352

Dear Mr. Caton:

On behalf of Ross Engineering Co. ("Ross"), we are filing an original and four (4) copies of its Comments in the above cited matters.

If there are any questions, do not hesitate to contact the undersigned.

Respectfully submitted,

FLETCHER, HEALD & HILDRETH, PLC

*Leonard Robert Raish*  
Leonard Robert Raish  
Counsel for Ross Engineering Co.

LRR:cej  
Enclosures

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BEFORE THE

**Federal Communications Commission**

WASHINGTON, D.C. 20554

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SEP 15 1997

In the Matter of )

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

)  
)  
Amendment of the Commission's  
Rules Concerning Maritime  
Communications )

PR Docket No. 92-257  
RM-7956, 8031, 8352

To: The Commission

**COMMENTS BY ROSS ENGINEERING CO.**

Ross Engineering Co. ("Ross"), by its attorneys and pursuant to the provisions of Section 1.415 of the Rules and Regulations of the Federal Communications Commission ("FCC" or "Commission"),<sup>1</sup> hereby submits its comments in response to the *Second Further Notice of Proposed Rulemaking ("Second Further Notice")* in the above-referenced proceeding.<sup>2</sup>

The main point of the comments by Ross is to stress safety and the use of Automatic Identification Systems (AIS) to provide for safety, and/or to provide for mandatory carriage of AIS for safety.<sup>3</sup> Ross also supports strongly the related petition of the U.S. Coast Guard filed separately on August 4, 1997.<sup>4</sup> The U.S. Coast

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<sup>1</sup>47 C.F.R. §1.415 (1997).

<sup>2</sup>*In the Matter of Amendment of the Commission's Rules Concerning Maritime Communications*, PR Docket No. 92-257, *Second Report and Order and Second Further Notice of Proposed Rule Making* (released June 26, 1997); *Order Extending Comment and Reply Comment Period* released August 21, 1997.

<sup>3</sup>See IMO NAV-43/WP.4. Revision of SOLAS Chapter 5 - Draft Regulation 20 Para. 1.5.4 dated 16 July 1997.

<sup>4</sup>*See Petition for Rulemaking* filed by the United States Coast Guard ("Coast Guard Petition"), which, among other things, requests that two VHF maritime

Guard petition is based, inter alia, on the Coast Guard Ports and Waterways Safety System (PAWSS), draft specification dated June 5, 1997 and the PAWSS Commerce Business Daily (CBD) announcement dated August 25, 1997 specifically for the AIS included in the PAWSS program.

### **I. GENERAL**

Ross Engineering is a Florida corporation located in Largo, Florida. It is a manufacturer of VHF radio communications equipment, a manufacturer of AIS equipment, an operator of marine VHF coast stations, and a provider of VHF Radio Services. Further, Ross Engineering has operated under an experimental license in Tampa Bay (an STA) since July 1994 (the license has already been renewed once),<sup>5</sup> and we have been operating at 12.5 KHz offsets from the 25 KHz public correspondence channels operated by GTE in Tampa Bay without even one incident of interference. The physical separation between the towers of Ross and GTE is about 12 miles, and Ross has occupied 11 KHz maximum bandwidth, which is within the bandwidth specified by the FCC for 12.5 KHz special channels under Part 90 of the Commission's Rules. One benefit of the AIS operation is that it is data-burst oriented, with very short bursts of less than 250 milliseconds. For all these stated

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narrowband channels in each area be made available specifically for Automatic Identification Systems ("AIS") and related safety systems filed August 4, 1997.

<sup>5</sup>This license was granted for the express purpose of developing AIS and the corresponding radio rules. Note the application for the experimental license for this experimental license contained a letter of request from the NTIA dated July 1, 1994. The operation of this radio station has been under the technical oversight of NTIA. The NTIA has subsequently performed extensive testing at the request of the U.S. Coast Guard, and the test results are in their report.

reasons, Ross believes that the U.S. Coast Guard's petition to the FCC referenced above is both timely and appropriate, and that AIS is a perfect application for the 12.5 KHz offset channels.

For all these reasons, Ross is very interested in this proceeding.

## **II. VHF PUBLIC COAST STATION SPECTRUM**

As a manufacturer, Ross is not concerned directly with all of the subject areas raised in the Second Further Notice. However, the following general comments are offered:

- (a) **Geographic Service areas.** The objective that should be borne in mind is to provide the best way to serve ships, to provide for marine safety, and to permit greater use of automated systems. Accordingly, there is no objection to the use of geographic service areas as long as priority for marine use is carefully defined and is made applicable between marine public correspondence services and marine public safety services.
- (b) **Treatment of Incumbent licensees.** Ross urges the Commission to reconsider its conclusion that incumbent licensees should not be given special consideration in the course of the auction process. Incumbents are already there and providing service, including public safety. They should be given favorable consideration.
- (c) **Licensing** - Since the licensed spectrum will be used increasingly for maritime safety, precaution is mandated that one safety service should not interfere with

the operation of another safety service, i.e., land mobile safety services should not cause interference to maritime safety and vice versa.

Continuing, there is concern on how regional licensees would handle a mixture of land mobile and marine traffic. To a great extent, maritime traffic is governed by international regulations, e.g., the ITU, IMO, and provisions of SOLAS whereas land mobile is almost entirely a domestic issue. Integration of the two services under a service area licensee could present serious problems in the conduct of land mobile and marine operations. Differences in the conduct of land mobile communications and maritime communications could create serious procedural problems for service area licensees. For example, maritime communications do not generally involve mobile-to-mobile communications as a coast (base) station is nearly always involved.

### **III. USE OF NARROWBAND TECHNOLOGY FOR MARITIME PUBLIC CORRESPONDENCE SERVICE SHOULD BE DEFERRED UNTIL ACTIONS AT INTERNATIONAL AND NATIONAL LEVELS ARE COMPLETED**

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The Coast Guard has filed a Petition with the Commission<sup>6</sup> that, inter alia, notes transmitters operating on 12.5 KHz narrow band channels cause interference to receivers utilizing adjacent wideband channels, the only available spectrum for narrowband use is in the duplex public correspondence band.<sup>7</sup>

The fact is that in the United States, the only available VHF maritime duplex channels recognized internationally are from spectrum allocated for public coast

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<sup>6</sup>See page 1 above, Footnote 4.

<sup>7</sup>See NTIA Report No. NTIA TR 97-xx entitled "Assessment of Compatibility Between 25 KHz and 12.5 KHz channelized marine VHF Radios." August 1997.

station use. The Coast Guard has petitioned for rulemaking to establish and make available VHF maritime narrowband (interstitial) channels, from within this duplex spectrum, in between the public correspondence channels for AIS and related systems used in new and existing vessel traffic services (VTS) and in U.S. ports and waterways.

As already stated, Ross supports the Coast Guard Petition for Rulemaking and agrees the public correspondence service should not be permitted to start using the interstitial frequencies at this time for the following reasons:

- 1) The public correspondence has no need at this time for these interstitial channels. Coast stations currently have installed only one or two 25 KHz channels, and there is a total of nine available. Thus, in the short term, they will have plenty of available capacity for expansion without 12.5 KHz channels. After appropriate rules are finalized, these interstitial channels could be made available on a shared basis between public correspondence and marine safety (AIS). The only factors, other than AIS, that would press the need for 12.5 KHz channels at this time would be uses in Part 90, which already has provisions for 12.5 KHz. Ross would oppose Part 90 use of these channels in the strongest terms. Opening 12.5 KHz channels to land mobile use will be opening the maritime service up for serious compatibility problems.
- 2) No type acceptance has been granted under Part 80 for 12.5 KHz equipment. Currently, only Part 90 equipment could access the channels. However, it should be noted the U.S. Coast Guard could operate 12.5 KHz equipment for AIS without type acceptance.

3) The NTIA report<sup>8</sup> raises extreme caution as to usage and calls for geographic offsets between wideband stations and narrowband stations that are frequency offset by 12.5 KHz. This raises the question as to whether or not the public coast stations can afford to establish additional offset stations for frequencies they do not currently need.

4) In order for public correspondence to benefit from 12.5 KHz channels, these channels must be implementable on the same stations as the 25 KHz channels. This simply cannot happen until the whole band is converted to 12.5 KHz channel bandwidth, and that is likely not to happen soon, since there is no international consensus on the need for 12.5 KHz channels for general-purpose VHF maritime use.

5) Since there are currently no Part 80 rules for the use of the interstitial channels, any proposed use of them in the interim, except for AIS, would be presumptuous and should not be permitted.

6) Federal technical oversight is needed for the use of the interstitial channels in the interim period in which STAs are operating. Ross proposes that the NTIA be the frequency coordinator for the use of these channels during this interim period, and that the channels be used only for AIS until international consensus is reached and appropriate rules for non-AIS use are finalized.

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<sup>8</sup>See Footnote 7 above.

Finally, in connection with the foregoing, the Commission's attention is called to action of the IMO with regard to AIS.<sup>9</sup> Until WRC-97 and ITU Radiocommunications Bureau-R completes its work on standards for AIS the interstitial channels should not be opened up for other uses, since the rules adopted for AIS could end up imposing limitations on those other uses.

#### **IV. COMPETITIVE BIDDING**

Ross is aware of the market based spectrum policies and notes the Chief of the Commission's Wireless Telecommunications Bureau has hailed the success of these policies.<sup>10</sup> Ross does not oppose the use of spectrum auctions in principle but maintains there is a special consideration that should be applied to the nine duplex pairs of 25 KHz public correspondence channels. The eventual intention is to develop AIS on the interstitial channels of the nine duplex channels available for licensing under Part 80 of the FCC Rules. Thus, those nine duplex channels should be auctioned as a bloc with the clear understanding PLMR usage would be separated by 150 miles from coasts and waterways.

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<sup>9</sup>See IMO NAV-43/WP.2 - Annexes 5, 6, and 8 which are respectively a Draft Recommendation on Performance Standards for An Universal Shipborne Automatic Identification System (AIS), a request to WRC-97 to assign VHF maritime frequencies for AIS, and draft liaison statement to ITU Working Party 8B requesting a technical standard for AIS be developed.

<sup>10</sup>See Statement by Dan Phythyon before Personal Communications Industry Asso. '97 Convention in Dallas, Texas on September 11, 1997. (FCC News Release No. 76514 dated September 11, 1997.)



**V. CONCLUSIONS**

In conclusion:

- (a) Maritime safety should be stressed at all times as this proceeding continues.
- (b) Provisions should be made for the eventual mandatory carriage of AIS.
- (c) As regards Geographic Service Areas, the objective should be to recognize the need to serve ships, to provide for marine safety, and to permit greater use of automated systems. While there is no objection to the Geographic Service Area concept, priority for maritime use must be carefully defined.
- (d) Incumbent licensees should be given special consideration.
- (e) Licensing will have to be managed so that land mobile usages do not cause interference to the maritime safety services.
- (f) Note must be taken that maritime telecommunications, especially safety, are governed to a great degree by international regulations, i.e., those of the ITU, IMO, and SOLAS.
- (g) Use of narrowband technology for maritime public correspondence should be deferred until actions at international and national levels are completed.
- (h) Note should be taken that while type acceptance has been granted for 12.5 KHz equipment in Part 90 of the FCC Rules this is not the case for Part 80.

- (I) While the concept of auctions is not opposed, the nine duplex pairs of 25 KHz public correspondence channels present a special case. In order to develop AIS, those nine duplex channels should be auctioned as a bloc.

Respectfully submitted,

ROSS ENGINEERING CO. INC.

By: Leonard Robert Raish  
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Its Attorney

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September 15, 1997

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